

1. (Twice Amended) A processing apparatus comprising:

a gas supply mechanism that supplies a processing gas into a processing chamber via a plurality of gas supply holes including a plurality of primary gas supply holes and a plurality of circulating gas supply holes,

an evacuating mechanism that evacuates the processing gas from said processing chamber, and

a gas circulating mechanism that returns at least a portion of exhaust gas evacuated from said processing chamber to said gas supply mechanism,

wherein said gas supply mechanism includes,

a primary gas supply system that supplies primary gas supplied from a processing gas source into said processing chamber via said primary gas supply holes, and

a circulating gas supply system that supplies at least a portion of the exhaust gas into said processing chamber via said circulating gas supply holes with said primary gas supply system and said circulating gas supply system constituted as systems independent of each other, and

wherein the ratio of the number of said primary gas supply holes and the number of said circulating gas supply holes is set equal to the ratio of a target flow rate for said primary gas and a target flow rate for said circulating gas, and

wherein the hole radius and the hole density of said primary gas supply holes are constant over the entire surface.

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10. (Twice Amended) A processing apparatus according to claim 1, wherein the gas supply mechanism is configured to provide the primary gas at the outlet of said primary gas supply holes into said processing chamber at a velocity equal to or higher than 500 m / sec.

11. (Amended) A processing apparatus according to claim 1, wherein the gas circulating mechanism is configured to provide said circulating gas at the outlet of said circulating gas supply holes into said processing chamber at a velocity equal to or higher than 500 m / sec.

Please add the following new claims 14 and 15.

14. (New) A processing apparatus comprising:

a gas supply mechanism that supplies a processing gas into a processing chamber via a plurality of gas supply holes including a plurality of primary gas supply holes and a plurality of circulating gas supply holes;

an evacuating mechanism that evacuates the processing gas from said processing chamber; and

a gas circulating mechanism that returns at least a portion of exhaust gas evacuated from said processing chamber to said gas supply mechanism,

wherein said gas supply mechanism includes,

a primary gas supply system that supplies primary gas supplied from a processing gas source into said processing chamber via said primary gas supply holes, and

a circulating gas supply system that supplies at least a portion of the exhaust gas into said processing chamber via said circulating gas supply holes with said primary gas supply system and said circulating gas supply system constituted as systems independent of each other, and

wherein the number of said circulating gas supply holes is greater than the number of said primary gas supply holes.

15. (New) A processing apparatus comprising:

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a gas supply mechanism that supplies a processing gas into a processing chamber;

an evacuating mechanism that evacuates the processing gas from said processing chamber, and

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a gas circulating mechanism that returns at least a portion of exhaust gas evacuated from said processing chamber to said gas supply mechanism,

wherein said gas supply mechanism includes,

a primary gas supply system that supplies primary gas supplied from a processing gas source into said processing chamber, and

a circulating gas supply system that supplies at least a portion of the exhaust gas into said processing chamber with said primary gas supply system and said circulating gas supply system constituted as systems independent of each other, and

wherein the supply quantity of the circulating gas is greater than the supply quantity of the primary gas.

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